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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,669

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James Stanley Campbell

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EXAMINER

KLEMANSKI, HELENE G

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/06/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/525,669

Applicant(s)

CAMPBELL ET AL.

Examiner

Helene Klemanski

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 18, 22-24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 18, 22-24 and 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Claims 1, 3, 4, 7-10 and 18 have been amended, claims 14-17, 19-21 and 25 have been deleted and new claims 27 and 28 have been added. Hence, claims 1-13, 18, 22-24 and 26-28 are pending in the application.
2. The objection to the claims as set forth in the previous Office Action dated October 10, 2006 has been overcome by applicant's amendments and is now withdrawn.
3. The 112, second paragraph, rejection as set forth in the previous Office Action dated October 10, 2006 has been overcome by applicant's amendments and is now withdrawn. A new 112, a second paragraph rejection is entered below.
4. The substantial duplicate warning as set forth in the previous Office Action dated October 10, 2006 has been overcome by applicant's amendment and is now withdrawn.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1, 4 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the twenty-second line after the formula (I), the phrase "selected from" is considered indefinite since this is improper Markush language. It is the examiner's

position that other materials could be present in the Markush group that were not intended by applicants by the use of the phrase "selected from" since this phrase does not exclude other materials. The examiner suggests the language "selected from the group consisting of" in place of this phrase.

In claims 4 and 28, the phrase "in the region above 400 nm at or above 750 nm" is considered vague and indefinite since it is unclear what the region covers. Is the region at or above 450 nm or at or above 750 nm? Please clarify.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

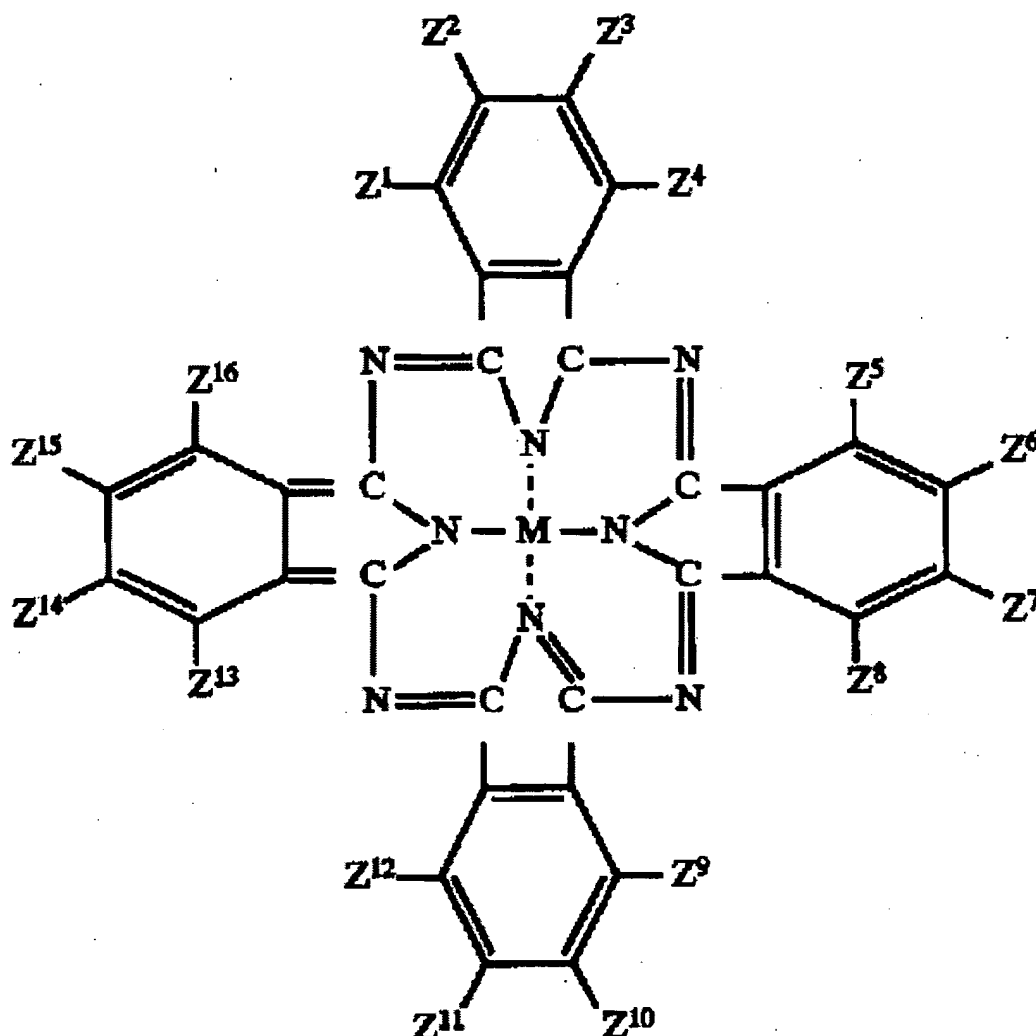
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 3-11, 13, 28 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaieda et al. (US 5,712,332).

Kaieda et al. teach a method for absorbing heat radiation using a heat radiation-absorbing material comprising a resin and a phthalocyanine compound of the formula

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wherein  $Z^1$ - $Z^{16}$  independently represent  $SR^1$ ,  $OR^2$ , H, a halogen atom or  $NHY$ ;  $R^1$  and  $R^2$  independently represent a phenyl which may have a substituent selected from the group consisting of 1-3 alkyl groups having 1-4 carbon atoms, 1 or 2 alkoxy groups having 1-4 carbon atoms, 1 or 2 alkoxy carbonyl groups having 1-8 carbon atoms and 1-5 halogen atoms, or an alkyl group having 1-20 carbon atoms;  $Y$  independently represents a phenyl group which may have a substituent or an alkyl group of 1-8 carbon atoms; and  $M$  represents a metal oxide such as vanadyl or titanyl; provided that at least

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one of  $Z^1-Z^{16}$  is NHY such as  $VOPc(BuNH)_8(BuS)_8$ ,  $VOPc(O-TolNH)_8(PhS)_8$ ,  $VOPc[(EtNH)_4(PhS)_4](PhS)_8$  and  $VOPc(PhNH)_8(PhS)_8$ . See col. 3, line 40 – col. 5, line 31, col. 8, line 67 – col. 9, line 44, Table 1; example 10, Table 3; example 23, Table 4; example 36, Table 5; example 43, Table 6 and claims 1 and 4. The phthalocyanine compound as taught by Kaieda et al. appears to anticipate the present claims.

The only limitations in the claims not found by the examiner are the electronic absorption peak, the absorption strength and the bandwidth at half peak height in solution. However, these limitations are considered inherent because there does not appear to be any reason why the cited reference would not contain a phthalocyanine compound with applicants claimed properties since the phthalocyanine compound of Kaieda et al. is the same formula as claimed by applicants.

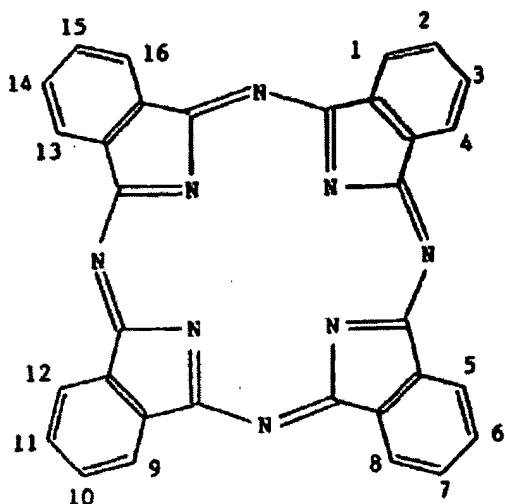
### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-13, 18, 22 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0155780.

EP 0155780 teaches an infra-red absorbing phthalocyanine compound of the formula



wherein each of at least 5 preferably 8 of the peripheral carbon atoms in the 1, 4, 5, 8, 9, 12 or 16 positions of the phthalocyanine nucleus is linked by an atom such as S, Se, Te or NT where T is H, alkyl or aryl to a carbon atom of an organic radical such as an optionally substituted aliphatic, alicyclic or aromatic radical such as an optionally substituted benzene or naphthalene. The remaining peripheral carbon atoms may carry other substituents such as halogen atoms but are preferably unsubstituted (i.e. are hydrogen). The phthalocyanines may be metal free or it may be complexed with a metal such as vanadyl. The phthalocyanines have an absorption peak in the region from 750 to 1100. The phthalocyanine compound is useful in infra-red ink compositions and infra-red security systems. EP 0155780 teaches that a security card can be rendered opaque to infra-red radiation by application to the card of an ink containing the above phthalocyanine compound by thermal transfer or ink-jet printing. See the abstract, page 1, lines 3-36, page 2, lines 21-28, page 3, lines 3-23, page 4, line 5 – page 5, line 1, page 5, line 14, page 7, lines 26-28, page 10, lines 12-19, page 11, lines 1-4, examples 1, 3, 5, 10, 13, 16 and 59 and claims 1-4, 6-8, 10 and 15. EP 0155780

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fails to specifically exemplify that the phthalocyanine compound is complexed with an oxymetal such as VO as claimed by applicants.

Therefore, it would have been obvious to one having ordinary skill in the art to use the specific phthalocyanine compound complex with VO as claimed by applicants as EP 0155780 also discloses the use of these phthalocyanine compounds but fails to show an example incorporating them.

11. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0155780 as applied to claims 1-13, 18, 22 and 26-28 above, and further in view of Albert et al. (US 5,282,894).

EP 0155780 is cited and relied upon for the above stated reasons. EP 0155780 fails to teach the addition of a colorant or an acrylate monomer to the infra-red ink composition as claimed by applicants.

Albert et al. teach a liquid printing ink for security printing comprising a similar phthalocyanine dye, a solvent, a binder such as polyacrylate or polymethacrylate and optionally a colorant. See col.1, line 5 – col. 2, line 11, col. 9, line 22 – col. 10, line 27, General process II and claim 1.

Therefore, in view of the combined teachings of EP 0155780 and Albert et al., it would have been obvious to one having ordinary skill in the art to have modified the ink composition of EP 0155780 by adding the binder and a colorant since Albert et al. shows that these additives are conventional components of security ink compositions.



### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-13, 18, 22-24 and 26-28 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that the EP 0155780 reference does not teach the specific phthalocyanine compounds as claimed by applicants since: (1) the EP 0155780 reference requires only at least 5 of the groups  $R^1$  to  $R^{16}$  to be substituted and (2) the EP 0155780 reference does not specifically exemplify the use of an oxymetal as claimed by applicants. With respect to (1), the examiner disagrees since the EP 0155780 reference discloses at least 5, preferably at least 6 and more preferably 8 of the peripheral carbon atoms as substituted (see page 2, lines 21-25, Formula 3, page 5, line 14, example 1 and claims 1 and 2). With respect to (2), the examiner agrees that the EP 0155780 reference does not specifically exemplify the use of oxymetals but it is the examiner's position that they are suggested (see page 4, lines 19-21 and page 5, line 14). See the new 103(a) rejection over the EP 0155780 reference above.

### ***Conclusion***

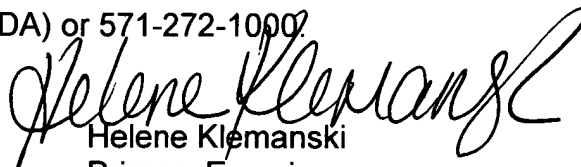
The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Helene Klemanski  
Primary Examiner  
Art Unit 1755



HK  
March 25, 2007